



Practice Masters Level A

9.5 Common Factors

* One of these answers is incorrect (at least one!)
Be the first to find it and get extra credit!

Factor each polynomial by finding the GCF.

1. $3x - 12$ $3(x - 4)$

2. $8z^2 - 4z$ $4z(2z - 1)$

3. $5x^2 - 5x - 20$ $5(x^2 - x - 4)$

4. $q^6 - q^3$ $q^3(q^3 - 1)$

5. $9x^2 + 36x + 15$ $3(3x^2 + 12x + 5)$

6. $12s^2 - 6s + 8$ $2(6s^2 - 3s + 4)$

7. $100 - 20d^3 + 10d$ $10(10 - 2d^3 + d)$

8. $7b^4 + 7b^2$ $7b^2(b^2 + 1)$

9. $16t^2 + 32t$ $16t(t + 2)$

10. $60c^3 - 45c^2 + 15c$ $15c^2(4c^2 - 3c + 1)$

11. $2z^4 - z^3 + 5z^2$ $z^2(2z^2 - z + 5)$

12. $24s^4 - 15s^3 + 9s^2$ $3s^2(8s^2 - 5s + 3)$

Write each polynomial as the product of two binomials.

13. $y(y + 2) + 3(y + 2)$ $(y + 2)(y + 3)$

14. $7(w + 6) - x(w + 6)$ $(w + 6)(7 - x)$

15. $(r + 15)t + (r + 15)3$ $(r + 15)(t + 3)$

16. $k(k + 5) - 8(k + 5)$ $(k + 5)(k - 8)$

17. $2x(x - 3) - 5(x - 3)$ $(x - 3)(2x - 5)$

18. $11(s - 9) - 3t(s - 9)$ $(s - 9)(11 - 3t)$

19. $(6 + d)5 - e(6 + d)$ $(6 + d)(5 - e)$

20. $4(p + 9) - t^2(p + 9)$ $(p + 9)(4 - t^2)$

21. $a(b + 2) - c(b + 2)$ $(b + 2)(a - c)$

22. $4(m + 3) - n(m + 3)$ $(m + 3)(4 - n)$

23. $2f(3 - g) - 5(3 - g)$ $(3 - g)(2f - 5)$

24. $4x(x + 7) - 5(x + 7)$ $(x + 7)(4x - 5)$

Factor by grouping.

25. $3a + ax + 3b + bx$ _____

26. $xy - y + 3x - 3$ _____

27. $cd - 3c + 2d - 6$ _____

28. $x^2 + 5x + 3x + 15$ _____

29. $ax + 3x + ay + 3y$ _____

30. $x^2 - 5x - 2x + 10$ _____

31. $y^2 + 5y + 5y + 25$ _____

32. $8x^2 - 6x - 12x + 9$ _____

33. $7t^2 - 21t + 8rt - 24r$ _____

34. $4m + 12 + 3m + 9$ _____